WE CLAIM:

Please cancel, without prejudice, claims 2,

1. (presently amended) A disk drive comprising:

(a) a disk comprising a plurality of tracks, each track comprising a plurality of data sectors;

(b) a head actuated radially over the disk, the head for generating a read signal while reading data from at least one of the data sectors;

(c) a sampling device for sampling the read signal to generate read signal sample values;

(d) a sequence detector for detecting an estimated data sequence from the read signal sample values;

~~(c)~~(e) a buffer ~~for buffering read data associated with the read signal~~;

~~(d)~~(f) a disk controller for processing a read command received from a host computer by:

positioning the head over a selected data sector to generate a first read signal;

sampling the first read signal to generate a first sequence of read signal sample values;

detecting a first estimated data sequence using the sequence detector from the first sequence of read signal sample values;

storing in the buffer ~~first read data associated with the first read signal~~the first estimated data sequence;

if a read error occurs:

repositioning the head over the selected data sector to generate a second read signal;

sampling the second read signal to generate a second sequence of read signal sample values;

detecting a second estimated data sequence using the sequence detector from the second sequence of read signal sample values;

averaging ~~second read data associated with the second read signal~~the second estimated data sequence with the first ~~read data~~estimated data sequence stored in the buffer to generate an averaged estimated data sequence ~~read data~~;

storing the averaged ~~read data~~estimated data sequence in the buffer; and

processing the averaged ~~read data~~estimated data sequence stored in the buffer to recover the selected data sector.

2. (canceled)

3. (presently amended) The disk drive as recited in ~~claim 2~~claim 1, wherein the disk controller implements an error correction code (ECC) for detecting and correcting errors in the averaged ~~binary bits~~estimated data sequence.

4. (presently amended) The disk drive as recited in claim 3, wherein:

(a) the averaged estimated data sequence comprises averaged binary bits;

~~(a)~~(b) the averaged binary bits are grouped into ECC symbols;

~~(b)~~(c) a reliability metric is generated for each ECC symbol in response to a reliability derived from averaging the binary bits; and

~~(c)~~(d) the disk controller processes the reliability metrics to augment the ECC.

5. (original) The disk drive as recited in claim 4, wherein:

(a) at least one erasure pointer is generated from the reliability metrics; and

(b) the disk controller processes the erasure pointer to increase the number of correctable ECC symbols.

6. (canceled)

7. (canceled)

8. (presently amended) The disk drive as recited in ~~claim 7~~claim 1, ~~wherein the read channel comprises~~further comprising:

~~(a)~~an equalizer filter for filtering the ~~averaged~~ read signal sample values to ~~generated~~ generate equalized read signal sample values, wherein the sequence detector detects the estimated data sequences from the equalized sample values.; ~~and~~

~~(b)a sequence detector for detecting the estimated data sequence from the equalized read signal sample values.~~

9. (original) The disk drive as recited in claim 1, wherein the disk controller adjusts at least one parameter of the disk drive prior to rereading the selected data sector.

10. (original) The disk drive as recited in claim 9, wherein the disk controller adjusts a read channel parameter.

11. (original) The disk drive as recited in claim 9, wherein the disk controller adjusts a servo control parameter.

12. (original) The disk drive as recited in claim 11, wherein the disk controller adjusts a tracking offset to at least two different settings wherein for each tracking offset setting the disk controller performs at least one reread of the selected data sector to generate the averaged read data.

13. (original) The disk drive as recited in claim 12, wherein for each tracking offset setting the disk controller performs multiple rereads of the selected data sector to generate the averaged read data.

14. (presently amended) A method of recovering an errant data sector in a disk drive, the disk drive comprising a disk having a plurality of tracks, each track comprising a plurality of data sectors, a head actuated radially over the disk, the head for generating a read signal while reading data from at least one of the data sectors, a sampling device for sampling the read signal to generate read signal sample values, a sequence detector for detecting an estimated data sequence from the read signal sample values, and a buffer ~~for buffering read data associated with the read signal~~, the method comprising the steps of:

(a) receiving a read command from a host computer;

(b) positioning the head over a selected data sector to generate a first read signal;

(c) sampling the first read signal to generate a first sequence of read signal sample values;

(d) detecting a first estimated data sequence using the sequence detector from the first sequence of read signal sample values;

~~(c)~~(e) storing in the buffer the first estimated data sequence ~~first read data associated with the first read signal~~;

if a read error occurs:

~~(d)~~(f) repositioning the head over the selected data sector to generate a second read signal;

(g) sampling the second read signal to generate a second sequence of read signal sample values;

(h) detecting a second estimated data sequence using the sequence detector from the second sequence of read signal sample values;

~~(e)~~(i) averaging the second estimated data sequence ~~second read data associated with the second read signal~~ with the first ~~read data~~estimated data sequence stored in the buffer to generate an averaged ~~read data~~estimated data sequence;

~~(f)~~(j) storing the averaged ~~read data~~estimated data sequence in the buffer; and

~~(g)~~(k) processing the averaged ~~read data~~estimated data sequence stored in the buffer to recover the selected data sector.

15. (canceled)

16. (presently amended) The method as recited in ~~claim 15~~claim 14, ~~further comprising~~wherein the step of processing the averaged estimated data sequence comprises the step of using an error correction code (ECC) for detecting and correcting errors in the averaged ~~binary bits~~estimated data sequence.

17. (presently amended) The method as recited in claim 16, wherein the averaged estimated data sequence comprises averaged binary bits, and the step of using the ECC for detecting and correcting errors further comprising the steps of:

(a) grouping the averaged binary bits into ECC symbols;

(b) generating a reliability metric for each ECC symbol in response to a reliability derived from averaging the binary bits; and

(c) processing the reliability metrics to detect and correct errors in the averaged binary data.

18. (original) The method as recited in claim 17, further comprising the steps of:

(a) generating at least one erasure from the reliability metrics; and

(b) processing the erasure pointer to increase the number of correctable ECC symbols.

19. (canceled)

20. (canceled)

21. (presently amended) The method as recited in ~~claim 20~~claim 14, further comprising the steps ~~of:~~

~~(a)~~filtering the ~~averaged~~ read signal sample values to generated equalized read signal sample values, wherein the sequence detector detects the estimated data sequences from the equalized sample values.~~; and~~

~~(b)detecting the estimated data sequence from the equalized read signal sample values.~~

22. (original) The method as recited in claim 14, further comprising the step of adjusting at least one parameter of the disk drive prior to rereading the selected data sector.

23. (original) The method as recited in claim 22, wherein the step of adjusting a parameter of the disk drive comprises the step of adjusting a read channel parameter.

24. (original) The method as recited in claim 22, wherein the step of adjusting a parameter of the disk drive comprises the step of adjusting a servo control parameter.

25. (original) The method as recited in claim 24, further comprising the steps of adjusting a tracking offset to at least two different settings wherein for each tracking offset setting rereading the selected data sector at least once to generate the averaged read data.

26. (original) The method as recited in claim 25, wherein for each tracking offset setting rereading the selected data sector multiple times to generate the averaged read data.